

CLAIMS

1. A method of aligning opposed telescopically engageable first and second annular components mounted in a press for making non-round disc-shaped blanks for subsequent forming into container bodies including the steps of:

5 providing the first annular component with a precision formed opening at a precise location;

 providing the second component with a precision formed opening at a precise location;

10 forming said first and second openings in their respective components whereby major and axii of said components are in accurate alignment with each other when said openings are in alignment with each other;

 mounting said first and second components in a spaced relationship from each other in the press whereby said notches are in general alignment with each other;

15 inserting an alignment key between the spaced components and into the spaced openings;

 rotatably adjusting one of said components until the alignment key properly seats in the spaced openings which accurately align the major and minor axii of the spaced components with respect to each other; and

20 securing the components in their accurately aligned positions in the press.

2. The method defined in claim 1 wherein the precision openings are notches formed in the periphery of the first and second annular components.

3. The method defined in claim 2 wherein the notches are formed with a rectangular configuration.

4. The method defined in claim 2 wherein each of the notches is formed with an open end; and in which the key is slidably inserted through said open ends into the notches.

5. The method defined in claim 2 wherein the alignment key is formed with a parallelepiped shaped body with a pair of outwardly extending stabilizing legs.

6. The method defined in claim 1 wherein the first annular component is a cut ring and the second annular component is a blank and draw die; in which the cut ring is formed with a non-round central opening defined by the major and minor axii; and in which the blank and draw die has an outer non-round disc forming surfaces defined by the major and minor axii.

7. The method defined in claim 6 wherein the cut ring has a greater outer diameter than the blank and draw die; and in which the alignment key is formed

with a right angled notch in a corner thereof to adjust for the difference in diameters.

5 8. The method defined in claim 1 wherein the step of mounting the annular components in the press includes securely mounting one of said components and loosely mounting the other of said components prior to inserting the alignment key into the spaced openings.

10 9. The method defined in claim 8 wherein the first component is a cut ring and the second component is a blank and draw die, in which the cut ring is spaced vertically above the blank and draw die, and in which the blank and draw die is the component which is securely mounted after inserting the alignment key into the spaced openings.

15 10. A method of retrofitting a container body forming press from producing round disc-shaped blanks to producing non-round disc-shaped blanks comprising the steps of:

20 removing a cut ring and a blank and draw die having telescopically engageable mating surfaces for cutting round disc-shaped blanks from sheet material;

providing a cut ring with a non-round central opening defined by major and minor axii with a precision opening formed at a precise location;

providing the blank and draw die with a non-round outer cut edge defined by major and minor axii with a precision opening formed at a precise location;

forming said first and second openings whereby major and axii of said cut ring and blank and draw die are in accurate alignment with each other when said openings are in accurate alignment with each other;

mounting said cut ring and blank and draw die in a spaced relationship from each other in the press whereby said precision openings are in general alignment with each other;

inserting an alignment key into the spaced openings;

rotatably adjusting one of said cut ring and blank and draw die until the alignment key properly seats in the spaced openings which accurately aligns the major and minor axii of the spaced cut ring and blank and draw die with respect to each other; and

securing the cut ring and blank and draw die in their accurately aligned positions in the press while the key is in the spaced opening and extending between the cut ring and blank and draw die.

11. The method defined in claim 10 wherein the precision openings are rectangularly-shaped notches formed in peripheries of the cut ring and blank and draw die, respectively; and in which the alignment key is slidably inserted into said notches.

12. The method defined in claim 11 wherein the alignment key has paralleliped-shaped body with a pair of stabilizing legs extending perpendicularly outwardly from opposite sides of said body.

5 13. The method defined in claim 12 wherein the alignment key body has a right angled notch formed in one corner thereof to provide clearance from the cut ring.

10 14. The method defined in claim 10 wherein the cut ring is spaced vertically above the blank and draw die in the press.

15 15. A key for aligning a cut ring and a blank and draw die when mounted in a press for making non-round blanks for subsequent forming into container components comprising:

15 a main body having a first end complementary to the cross sectional shape of a notch formed in the periphery of the cut ring and a second end complementary to the cross sectional shape of a notch formed in the periphery of the blank and draw die; and

20 stabilizing legs extending outwardly from the main body adapted to engage one of the cut ring and blank and draw die when the first and second body ends are engaged in the notches formed therein.

16. The key as defined in claim 15 wherein the body has a parallelopiped configuration with a right angle cutout being formed in a corner thereof.

17. The key as defined in claim 15 wherein portions of the main body have tapered edges to facilitate engagement of the first and second ends in the notches.

18. The key as defined in claim 15 wherein the stabilizing legs each have an elongated rectangular configuration terminating in a tapered edge.

19. The key defined in claim 15 wherein the stabilizing legs are spaced above an adjacent end surface of the main body and extend throughout the length of the side surfaces.

20. The key defined in claim 15 wherein the key is formed of a one-piece member formed of tool steel.